



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,174	04/29/2005	Gaddam Vasanth	US030092	8896
24737 7590 07/31/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
RAO, ANAND SHASHIKANT				
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
07/31/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/533,174

**Applicant(s)**

VASANTH ET AL.

**Examiner**

Andy S. Rao

**Art Unit**

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF 298)  
Paper No(s)/Mail Date 1/30/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Specification***

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 12-22 are rejected under 35 U.S.C. 101 as not falling within one of four statutory categories of inventions. Supreme Court precedent and recent Federal Circuit decisions indicate a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example there is no apparatus mentioned either in the preamble nor in all of the subsequent limitations for executing the method, nor is the communicating of leading and trailing bit strings considered “...transforming...” of the signal, *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Limberg et al., (hereinafter referred to as "Limberg").

Limberg discloses an apparatus for wirelessly communicating a leading bit string (Limberg: figure 4) comprising a header and a body, and a trailing bit string comprising a header and a body (Limberg: column 20, lines 35-40), the apparatus comprising: an encoder configured for encoding data to form the body of the leading bit string (Limberg: column 9, lines 64-67; column 10, lines 1-9), and forming the header of the trailing bit string to include at least one bit

of a parameter to be used by a receiver in decoding the encoded data (Limberg: column 10, lines 17-24); and a transmitter configured for transmitting to the receiver a wireless signal representing at the receiver the leading bit string and then the trailing bit string (Limberg: column 9, lines 25-50), as in claim 1.

Regarding claim 2, Limberg discloses wherein the receiver comprises a digital television receiver Limberg: column 14, lines 25-35), as in the claim.

Regarding claim 3 wherein said encoder is further configured for creating said bit strings so that a parameter in at least one of the leading and trailing bit string headers is utilizable by an equalizer in said receiver to resolve a signal that embodies at least one of the leading and trailing bit strings (Limberg: column 12, lines 12-45), as in the claim.

Regarding claim 4, wherein said parameter is one of a plurality of parameters having bits, the plural bits of the parameters being divided into two bit groups each having an equal number of bits, one of said bit groups being utilized in forming the leading bit string headers, the other bit group being utilized in forming the trailing bit string header, each of said bit groups further comprising a parity bit generated based on the bits of equal number of for the bit group (Limberg: column 9, lines 40-50), as in the claim.

Limberg discloses an apparatus for wirelessly transmitting a bit stream (Limberg: figure 4) comprising: an encoder configured for applying a fixed code to encode bits of the bit stream, one-by-one, to create an encoded bit-stream (Limberg: column 9, lines 64-67; column 10, lines 1-9); and a transmitter configured for modulating the encoded bit-stream to produce a signal whose frequency range at any given time is predetermined independently of the code, and for

wirelessly transmitting said signal within the frequency range (Limberg: column 9, lines 25-50), as in the claim.

Regarding claims 6-7, Limberg discloses wherein the fixed code comprises a linear recursive sequence such as “00011110101001” (Limberg: figures 1A-1B), as in the claim.

Regarding claim 8, Limberg discloses wherein the encoder further comprises a sequence generator that includes: a four-element shift register, the first element of the four-element shift register having an input terminal and the fourth element of the four-element shift register having an output terminal (Limberg: column 15, lines 62-67; column 16, lines 1-35); and an exclusive-OR (XOR) gate tap disposed between the third element and the fourth elements element of the four- element shift register, wherein said output terminal is connected to feed back to the first element and to the XOR gate tap (Limberg: column 20, lines 30-40), as in the claim.

Regarding claim 9, Limberg discloses wherein said bit-stream before encoding is a parameter bit-stream and said bits define a parameter in a header of a bit string comprising a header and a body, said encoder being further configured for encoding a data bit-stream and for combining the parameter and data bit-streams, after the parameter and data bit-streams have been encoded, to create said encoded bit-stream that is modulated to produce said signal whose frequency range at any given time is predetermined independently of the code, the parameter being defined so as to be utilizable by an equalizer configured to receive and to resolve said signal, the equalizer being part of a receiver configured for decoding the encoded data bit-stream from said body (Limberg: column 9, lines 40-50), as in the claim.

Regarding claims 10-11, Limberg wherein the encoder performs bit-by-bit encoding of said bits it performed at least one bit one bit at a time, the data to be encoded in forming said

body of the leading bit string not being encoded one bit at a time using a fixed code (Limberg: figures 1A-1B), as in the claims.

Limberg discloses a method for wirelessly communicating a leading bit string (Limberg: column 6, lines 16-25), comprising a header and a body, and a trailing a-bit string comprising a header and a body (Limberg: column 20, lines 35-40), the method comprising the steps of: encoding data (Limberg: column 9, lines 64-67; column 10, lines 1-9)); forming the body of the leading bit string from the encoded data (Limberg: column 9, lines 17-24); forming the header of the trailing bit string to include at least one bit of a parameter to be used by a receiver in decoding the encoded data (Limberg: column 9, lines 25-30); and transmitting to the receiver a wireless signal representing at the receiver the leading bit string and then the trailing bit string (Limberg: column 9, lines 31-50), as in claim 12.

Regarding claim 13, Limberg discloses wherein the receiver comprises a digital television receiver (Limberg: column 14, lines 25-35), as in the claim.

Regarding claim 14, Limberg discloses further comprising the step of utilizing, by an equalizer in said receiver, a parameter in at least one of the leading and trailing bit string headers to resolve a signal that embodies at least one of the leading and trailing bit strings (Limberg: column 12, lines 12-45), as in the claim.

Regarding claim 15, Limberg discloses wherein said parameter is one of a plurality of parameters having bits, the forming step further comprising the steps of: dividing the plural bits of the parameters into two bit groups each having an equal number of bits; generating a parity bit for each bit group, both parity bits being generated based on the bits of equal number of the group; utilizing one of said bit groups in forming the leading bit string header (Limberg: column

9, lines 40-50); and utilizing the other bit group in forming the trailing bit string headers (Limberg: column 9, lines 51-55), as in the claim.

Limberg discloses method for wirelessly transmitting a bit-stream (Limberg: column 6, lines 16-25), comprising the steps of: determining providing a fixed code (Limberg: column 9, lines 64-67); applying the fixed code to encode bits of the bit-stream, one-by-one, to create an encoded bit-stream (Limberg: column 10, lines 1-9); modulating the encoded bit-stream to produce a signal whose frequency range at any given time is predetermined independently of the code (Limberg: column 9, lines 25-30); and wirelessly transmitting said signal within the frequency rang (Limberg: column 9, lines 31-50), as in claim 16.

Regarding claims 17-18, Limberg discloses wherein the fixed code comprises a linear recursive sequence such as 000111101011001" (Limberg: figures 1A-1B), as in the claims.

Regarding claim 19, Limberg discloses providing a four-element shift register, a first element of the four-element shift register having an input terminal and a fourth element of the four-element shift register having an output terminal (Limberg: column 15, lines 62-67; column 16, lines 1-35); disposing an exclusive-OR (XOR) gate tap between a third element of the four-element shift register and the fourth elements element of the four-element shift register; and connecting said output terminal to feed back to the first element and to the XOR gate tap (Limberg: column 20, lines 30-40), as in the claim.

Regarding claim 20, Limberg discloses wherein said bit-stream before encoding is a parameter bit-stream, said method further comprising the steps of: forming said parameter bit-stream to contain a parameter that said bits define combining the parameter bit-stream with a data bit-stream, after the parameter and data bit-streams have been encoded, to create said



encoded bit- stream that is modulated to produce said signal whose frequency range at any given time is predetermined independently of the code; configuring a bit string to comprise a header and a body, the header containing encoded bits of the encoded parameter and the body containing encoded bits of the encoded data bit-stream; and performing the forming, combining and configuring steps so that the parameter is utilizable by an equalizer that is to receive and to resolve said signal and that is part of a receiver for decoding the encoded data bit-stream (Limberg: column 9, lines 40-50), as in the claim.

Regarding claims 21-22, Limberg discloses wherein the-bit-by-bit encoding of said at least one bit is performed one bit at a time, the data to be encoded in forming said body of the leading bit stream string not being encoded one bit at a time using a fixed code (Limberg: figures 1A-1B), as in the claims.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Birru discloses a digital transmission system for an enhanced ATSC 8-VSB system.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao  
Primary Examiner  
Art Unit 2621

asr  
/Andy S. Rao/  
Primary Examiner, Art Unit 2621  
July 30, 2009